

IN THE SPECIFICATION

Please insert the following on page 1, line 5:

--CROSS-REFERENCE TO RELATED APPLICATION

This application is a Divisional Application of Application No.10/336,520, filed on January 3, 2003.--

Please rewrite the paragraph on page 7, lines 26-27, as follows:

Thus, the larger the normalized coupling effect coefficient κL , the better the transmission characteristics.

Please rewrite the paragraph beginning on page 10, line 22, and ending on page 11, line 5, as follows:

In one sample of the phase-shifted DFB-LD of Fig. 6, if the etching depth of the diffraction grating 12 is $0.013\mu\text{m}$, the coupling coefficient κ is about 65cm^{-1} . In this case, if the cavity length L is $450\mu\text{m}$, the normalized coupling coefficient κL is 2.92. On the other hand, the gain peak wavelength λ_g of the MQW active layer 14 is made $1.58\mu\text{m}$, for example. In this case, if the period of the diffraction grating 12 is 240.0nm, the oscillation wavelength λ is 1.55. Thus, the detuning amount $\Delta\lambda$ is $0.03\mu\text{m}$. In this state where $(\Delta\lambda, \kappa L) = (0.03\mu\text{m}, 2.92)$, when this sample was directly-modulated at 2.5 Gb/s and was subject to a 100km transmission, the power penalty thereof was smaller than 1dB. Other samples each having a value of κL from 1.8 to 3.0 and a value of $\Delta\lambda$ from 5 to 50nm was directly-modulated at 2.5Gb/s 2.5 Gb/s and was subject to a 100km transmission, the power penalties are shown in Fig. 7. As a result, $A = 0.05\text{nm}^{-1}$ and $B = 3.0$. 3.8.

Please rewrite the paragraph on page 12, lines 21-25, as follows:

A fourth example is applied to a phase-shifted DFB-LD which is the same as the third example of phase-shifted DFB-LD except that the InGaAsP A1GaInAs MQW active layer 34 is modified to have a tensile strain of 1.0% or more. In this case, as shown in Fig. 11, $A = 0.05\text{nm}^{-1}$ and $B = 3.0$.